

## AMENDMENTS TO THE CLAIMS

### LISTING OF CLAIMS:

The following listing of claims replaces all previous listing of claims:

1. (Currently Amended) A forecasting process comprising:  
running an information market including an artificial market in which financial instruments are utilized, wherein said financial instruments are traded by participants in said information market;  
extracting participant characteristics through an analysis of results of trading of said financial instruments;  
performing a query process in addition to said running said information market, said query process including posing a predictive query to said participants and gathering results of said predictive query, said predictive query about a probability of a future outcome occurrence associated with an uncertain situation; and  
aggregating results of said query process with adjustments for said participant characteristics to produce an aggregated probability projection associated with said uncertain situation.
2. (Original) A forecasting process of Claim 1 wherein said information market is designed to elicit characteristics of participants.
3. (Original) A forecasting process of Claim 2 wherein said characteristics include participant risk inclination.
4. (Previously Presented) A forecasting process of Claim 2 further comprising utilizing different scenarios wherein said participants are presented with

different information and wherein said characteristics include participants ability to identify and respond to quality of said information provided in said information market.

5. (Original) A forecasting process of Claim 2 further comprising correlating observed behavior to accepted characteristic tendencies.

6. (Previously Presented) A forecasting process of Claim 2 wherein said information market includes an artificial market financial instrument corresponding to a real world state.

7. (Previously Presented) A forecasting process of Claim 1 wherein the results of the query process are aggregated by revising apriori probabilities with reports provided by participants and conditioning the reports by the characteristics of the participants.

8. (Currently Amended) A forecasting process of Claim 1 wherein the results of the query process are aggregated by utilizing Bayes formula with each probability of said future outcome occurrence ~~a potential outcome~~ assigned by a participant modified by an exponential factor to condition the probability for adjustments associated with each participant's characteristics.

9. (Currently Amended) A computer system comprising:  
a memory for storing instructions on implementing a forecasting method; and  
a processor that executes said the instructions on implementing a forecasting method, including:

running an information market including an artificial market in which financial instruments are utilized, wherein said financial instruments are traded by participants in said information market;

extracting participant characteristics through an analysis of results of trading of said financial instruments;

performing a query process in addition to said running said information market, said query process including posing a predictive query to said participants and gathering results of said predictive query, said predictive query about a probability of a future outcome occurrence associated with an uncertain situation; and

aggregating results of said query process with adjustments for said participant characteristics to produce an aggregated probability projection associated with said uncertain situation.

10. (Original) A computer system of claim 9 wherein said processor and memory are communicatively coupled to the Internet and participants interact with said forecasting computer system via the Internet.

11. (Previously Presented) A computer system of claim 9 wherein running said information market comprises:

organizing participants;

creating a financial instrument; and

establishing a mechanism for permitting participants to interact in said information market.

12. (Original) The computer system of Claim 9 wherein possible information market states are associated with an Arrow-Debreu state security.

13. (Original) The computer system of Claim 9 wherein said information market artificial instruments correspond to the occurrence of a real world state.

14. (Original) The computer system of Claim 11 wherein said information market comprises an artificial call market in which securities are traded.

15. (Original) The computer system of Claim 14 wherein running said information market further comprises:

- gathering the bids and asks at the end of a call round;
- determining a market price and volume;
- completing transactions; and
- beginning another call round.

16. (Currently Amended) A new environment aggregation function analysis process comprising:

- implementing an experimental information market including an artificial market in which financial instruments are utilized, wherein said financial instruments are traded by participants in said information market;

- developing a new predictive aggregation formula with adjustments for personal characteristics of said participants, wherein said new predictive aggregation formula aggregates predictive information related to said experimental information market, said personal characteristics extracted through an analysis of results of trading of said financial instruments;

creating a prediction benchmark representative of ~~a perfect information market aggregation mechanism~~ a probability distribution conditioned upon all information acts of said experimental information market;

defining a measure to compare said new predictive aggregation formula with said benchmark and

comparing said new predictive aggregation formula to said prediction benchmark to determine if said new predictive aggregation formula is providing beneficial information.

17. (Original) A new environment aggregation function analysis process of claim 16 wherein said new predictive aggregation formula is utilized in a forecasting process.

18. (Cancelled)

19. (Currently Amended) A new environment aggregation function analysis process of ~~claim 18~~ claim 16 wherein said ~~adjustment includes an~~ adjustments include individual participant predictions with exponential factoring for characteristics of the individual participants and the experimental information market as a whole.

20. (Currently Amended) A new environment aggregation function analysis process of claim 17 wherein three information aggregation mechanisms are compared to the benchmark distribution ~~given by Equation~~ by using the a Kullback-Leibler measure, wherein said three information aggregation mechanisms include a no information prediction aggregation mechanism for aggregating predictions regarding said experimental information market which are based upon no information about said

experimental information market, a prediction aggregation mechanism for aggregating  
experimental information market predictions of a best performing participant in said  
experimental information market, and a prediction aggregation mechanism based upon  
a non-linear aggregation of experimental information market predictions of said  
participants with exponential factoring for characteristics of the individual participants  
and the experimental information market as a whole, the predictions of the best  
individual and a non-linear aggregation measure.